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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/797,452

03/10/2004

Sam Baghdadi

2004P03672US

4438

7590

11/21/2006

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

PATEL, VISHAL A

ART UNIT

PAPER NUMBER

3673

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,452

Applicant(s)

BAGHDADI ET AL.

Examiner

Vishal Patel

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-16,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-16,19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-4, 9-11, 13-14 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross (US. 3,575,523) in view of Bunker (US. 6,027,306) and further in view of Losel (US. 1,689,735).

Gross discloses a turbine engine having a seal comprising a blade (blade 13 on 11) extending radially from a rotatable body (11), a plurality of blades (16 and 17) extending radially from a stationary body (15) towards the rotatable body and generally forming at least one row of blades (a row having blades 16 and 17), a high pressure gas region in the turbine engine that is proximate to the plurality of blades extending radially from the stationary body (figure 2) and opposite to the plurality of blades extending radially from the rotatable body, a low pressure region in the turbine engine that is proximate to the plurality of blades extending radially from the rotatable body and opposite to the plurality of blades extending radially from the stationary body (figure 2), wherein the low pressure region has a pressure less than the high pressure region (figure 2). The pluralities of blades form the seal between the high-pressure gas region and the low-pressure gas region. The plurality of blades extending radially from the stationary body are positioned proximate to the blade extending from the rotatable body and are nonparallel with the blade extending from the rotatable body (the blade on the rotatable body are non parallel to the

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blades on the stationary body). The blade coupled to the rotatable body is positioned to direct fluids from the low pressure gas region toward the high pressure gas region to limit leakage of fluids from the high pressure gas region proximate to the at least one row of the blades coupled to the stationary body to the low pressure gas region proximate to the blade coupled to the rotatable body (figure 2).

The blade extending radially from the rotatable body is aligned at an angle of between about 1 degree and about 89 degree relative to a rotational axis of the rotatable body (see angle of blade 13 in figure 3).

Gross discloses the invention substantially as claimed above but fails to disclose that plurality of blades on the rotatable body and that the blades have a height of 0.6 mm. Bunker discloses a rotatable body (22) having a plurality of blades (50) that are angled at about 1-60 degrees and the blades having a height of 0.6mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the blade of Gross to be plurality of blades on the rotatable body having an angle of 1-60 degrees from the rotational axis and the blades to be 0.6mm as taught by Bunker to provide an efficient turbine engine (column 3, lines 45-50 of Bunker).

Gross and Bunker disclose the invention substantially as claimed above but fail to disclose that the plurality of blades extending from the stationary body are positioned at an acute angle relative to a rotational axis of the rotatable body. Losel discloses (page 1, lines 65-70) a stationary member having plurality of blades (blades e), which are angled at an acute angle relative to a rotational axis of a shaft (a). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the plurality of blades of Gross and

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Bunker to be angled at an acute angle as taught by Losel, to provide an effective labyrinth seal and to prolong the life of the seal (page 1, column 1 of Losel).

3. Claims 2, 5-6, 12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross, Bunker and Losel as applied to claims above, and further in view of Albers (US. 4,571,937).

Gross discloses the invention substantially as claimed above but fails to disclose that the blades (16 and 17) on the stationary body are annularly spaced or formed intermittently and having an angle of about 1-89 degrees. Albers discloses plurality of blades (5) on a stationary body (4) and the blades are angled to about 1-89 degrees from a rotationally axis (rotational axis of 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the blades of Gross to be segmented annularly or formed intermittently to provide a turbine that has substantially no efficiency losses occurs (column 1, lines 51-52 of Albers).

Furthermore since the blades on the rotatable body of Gross and Bunker are angled between 0-60 degrees and the blades on the stationary body of Gross and Bunker can have an angle of 1-89 degrees by the teaching of Albers the blades are capable of being orthogonal to each other.

Response to Arguments

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP
November 16, 2006

A handwritten signature in black ink, appearing to read "Vishal Patel", with a stylized flourish at the end.

Vishal Patel
Primary Examiner
Tech. Center 3600